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| APPLICATION NO.  | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---------------------|------------------|
| 10/583,672   | 02/20/2007  | Alexander Shendi     | 3768                | 7111             |
| 278  | 7590        | 07/12/2010           | EXAMINER            |                  |
| MICHAEL J. STRIKER<br>103 EAST NECK ROAD<br>HUNTINGTON, NY 11743 |             |                      |                     | MOK, ALEX W      |
| ART UNIT   |             | PAPER NUMBER         |                     |                  |
|  |             | 2834                 |                     |                  |
| NOTIFICATION DATE  |             |                      | DELIVERY MODE       |                  |
| 07/12/2010   |             |                      | ELECTRONIC          |                  |

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

striker@strikerlaw.com

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/583,672             | SHENDI, ALEXANDER   |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | ALEX W. MOK            | 2834                |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 14 June 2010.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1 and 3-12 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1 and 3-12 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                        | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|   | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/14/10 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asao et al. (European Patent Document No.: EP 1353431 A1), and further in view of Ojo (“Multiobjective optimum design of electrical machines for variable speed motor drives”, article, IEEE, published Sept. 28-Oct. 4, 1991, pages 163-168).

For claim 1, Asao et al. disclose a stator for an electrical machine which comprises at least one stator iron (reference numeral 36, figure 25) and the stator iron has a substantially annular-cylindrical shape (see figures 17, 18, 28), and in which the stator iron has an axial direction which is oriented in the direction of a cylinder axis, and the stator iron has an end face which is oriented in the direction of the cylinder axis and defines a slot area (reference numeral

36a, figures 25-28). Asao et al. also disclose the stator iron having a number of individual laminations which are stacked one above the other (see paragraph ([0073], and figure 25), and also having two face ends which rest directly against one another (reference numeral 77, see figure 28), but do not specifically teach a ratio A formed of the slot area and the end face area that amounts to between 0.4 and 0.7. Ojo discloses a stator which has variables representing the different dimensions of the stator slot (see figure 1). It would have been obvious to a person of ordinary skill to adjust these variables of the stator slot as taught by Ojo in order to have the ratio for the slot area and end face area in the invention of Asao et al. as claimed since Ojo discloses optimizing the design of the stator (see pages 163-166), the same problem the claimed invention is concerned with. Also the limitation of the stator being made by the flat-packet technique is a process limitation which is not given patentable weight in an apparatus claim.

For claim 3, the reference of Asao et al. teaches the claimed invention but does not specifically disclose the stator having forty-eight inner teeth, nor the ratio A amounting to between 0.45 and 0.70. Asao et al. still disclose the stator core having a plurality of stator teeth (i.e. figures 17, 18), and Ojo discloses variables for the stator slot as explained for claim 1 above. It still would have been obvious for a person of ordinary skill to obtain a certain amount of stator teeth in Asao et al. such as forty-eight for purposes of properly operating the invention, and it also would have been obvious to have certain dimensions for the variables of Ojo to achieve the desired range for the ratio in the invention of Asao et al. for the same reasons given for claim 1.

For claim 4, the reference of Asao et al. teaches the claimed invention but does not specifically disclose the ratio A being between 0.45 and 0.60. Ojo discloses variables for the stator slot as explained for claim 1 above, and it still would have been obvious to adjust the

variables of Ojo to have the ratio A be between 0.45 and 0.60 in the invention of Asao et al. for the same reasons given for claim 1.

For claim 5, the reference of Asao et al. teaches the claimed invention but does not specifically disclose the stator having thirty-six inner teeth, nor the ratio A amounting to between 0.4 and 0.6. Asao et al. still disclose the stator core having a plurality of stator teeth (i.e. figures 17, 18), and Ojo discloses variables for the stator slot as explained for claim 1 above. It still would have been obvious for a person of ordinary skill to obtain a certain amount of stator teeth in Asao et al. such as thirty-six for purposes of properly operating the invention, and it also would have been obvious to have certain dimensions for the variables of Ojo to achieve the desired range for the ratio in the invention of Asao et al. for the same reasons given for claim 1.

For claim 6, the reference of Asao et al. teaches the claimed invention but does not specifically disclose the ratio A being between 0.40 and 0.55. Ojo discloses variables for the stator slot as explained for claim 1 above, and it still would have been obvious to adjust the variables of Ojo to have the ratio A be between 0.40 and 0.55 in the invention of Asao et al. for the same reasons given for claim 1.

For claim 7, Asao et al. teach the claimed invention except for the slot fill factor (F) amounting to between 50% and 80%. Since Ojo discloses the variables of the different dimensions of the stator slot as explained for claim 1 above, it would have been obvious for a person of ordinary skill to adjust these dimensions of Ojo to acquire the desired slot fill factor in the invention of Asao et al. for the purposes of optimizing the design of the stator.

For claim 8, Asao et al. teach the claimed invention except for the slot fill factor F amounting to between 60% and 70%. Since Ojo discloses the variables of the different

dimensions of the stator slot as explained for claim 1 above, it would have been obvious to for a person of ordinary skill to adjust these dimensions of Ojo to have the slot fill factor F amount to between 60% and 70% in the invention of Asao et al. for the same reasons given for claim 7.

For claim 9, Asao et al. disclose the slot having a contour which is defined toward the yoke by diametrically opposed tooth sides (see figure 26, reference numeral 36a) and a yoke contour, and the tooth sides of a slot having a spacing from one another in the circumferential direction (figure 26); and that a slot pitch being the spacing between two directly adjacent tooth centers of the stator iron at the diameter of the spacing. Asao et al. do not specifically disclose c3, which is a ratio of the spacing toward the yoke and the slot pitch at the yoke, amounting to between 0.45 and 0.65. Since Ojo discloses the variables of the different dimensions of the stator slot as explained for claim 1 above, it would have been obvious for a person of ordinary skill to adjust the spacing and slot pitch dimensions in Ojo to acquire the desired ratio range in the invention of Asao et al. for the purposes of optimizing the design of the stator.

For claim 10, Asao et al. disclose the slot having a contour which is defined toward the tooth head by diametrically opposed tooth sides (see figure 26, reference numeral 36a) and tooth head contours (figure 26), and the tooth sides of a slot, at the transition to the tooth head contours, having a spacing from one another in the circumferential direction (see figure 26); and that a slot pitch being the spacing between two directly adjacent tooth centers at the diameter of the spacing of the stator iron. Asao et al. do not specifically disclose c2, which is a quotient of the slot width of the tooth head and the slot pitch of the tooth, amounting to between 0.45 and 0.65. Since Ojo discloses the variables of the different dimensions of the stator slot as explained for claim 1 above, it would have been obvious for a person of ordinary skill to adjust the spacing

and slot pitch dimensions in Ojo to acquire the desired ratio range in the invention of Asao et al. for the purposes of optimizing the design of the stator.

For claim 11, Asao et al. teach the claimed invention except for c2 amounting to between 0.50 and 0.60 and (c3), which is the ratio of a spacing toward a yoke and a slot pitch of the yoke, amounting to between 0.47 and 0.60, Ojo again discloses different dimensions for the stator slot as explained for claim 1 above, including W<sub>1</sub> and W<sub>2</sub> (see figure 1), and it still would have been obvious to adjust these variables of Ojo to have the claimed ratio in the invention of Asao et al. since it would optimize the design of the stator, the same reasons given for claim 1.

For claim 12, Asao et al. disclose a rounded shape around the sides of the slot (see figure 26), i.e. the tooth sides changing over by means of rounded transitions to the tooth head contours and the yoke contour, but do not specifically teach the radii amount to be between 0.3 mm and 2.0 mm. Ojo discloses the variables of the different dimensions of the stator slot as explained for claim 1 above, and it would have been obvious to adjust these dimensions of Ojo to have this range of the radii in the invention of Asao et al. for the same reasons given above for claim 1.

### ***Response to Arguments***

4. Applicant's arguments filed June 14, 2010 have been fully considered but they are not persuasive. In response to the applicants' assertion that it is unclear how the teaching of the Ojo reference can be transferred to the machine disclosed by the reference of Asao et al. since the reference of Ojo teaches a motor and rotor with permanent magnets and the reference of Asao et al. teaches a generator and rotor with a rotor winding and pole cores, the reference of Ojo teaching a motor instead of a generator does not exclude any of its teachings from being applied

to the generator of Asao et al. since the reference of Ojo deals with optimizing the different variables of the stator as shown on page 166 and figure 1 to achieve a desirable efficiency for the machine. This feature of Ojo would have commended itself to the inventor's attention since the applicant is concerned with achieving an optimal design for the stator as recited in applicant's own disclosure of the claimed invention, and therefore provides the motivation to apply the teachings of Ojo to the invention of Asao et al. in order to produce the applicant's invention. Further, the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981).

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ALEX W. MOK whose telephone number is (571)272-9084. The examiner can normally be reached on 7:30-5:00 Eastern Time, 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Quyen P. Leung can be reached on (571) 272-8188. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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